

Dnieper River Line



DNIEPER RIVER LINE IS AVALON HILL'S TRADEMARK NAME
FOR ITS COMPUTER GAME OF OPERATIONAL LEVEL COMBAT ON THE EASTERN FRONT



microcomputer games®

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Dnieper River Line

COMBAT MANUAL

I. INTRODUCTION

Dnieper River Line (DRL) depicts a fictionalized engagement between the Russian and German forces in Belorussia. Using as its historical basis the Soviet thrust against the Dnieper River in late 1943, DRL challenges the German player, representing Army Group South, to repel the Russian efforts to breach this critical defensive position. Soviet units, controlled by the computer, seek to over-run the German defensive line and capture sufficient centers of resistance to assure victory.

Complicating the German situation are Russian capabilities such as:

AIR ATTACKS—by dreaded Sturmovik aircraft.

ARTILLERY BARRAGES—which may weaken and disrupt German defensive units.

PARTISAN AND PARATROOP ATTACKS—forcing the German player to defend both forward and rear positions.

UNKNOWN SOVIET OBJECTIVES—requiring the German player to decide which objective areas are to be defended.

Aiding the German player are passive defensive measures such as garrison companies and minefields, as well as on-map and off-map artillery fire.

DRL establishes the gaming situation by determining the following factors:

- A) Russian force composition
- B) Priority of Russian objectives
- C) Initial Russian starting positions
- D) Degree of difficulty and length of game
- E) German force composition
- F) German force starting positions
- G) Minefield strengths and locations
- H) Garrison locations

DRL is played on a map (see separate playing aid). The map is broken into 144 squares, 12 squares by 12 squares. Positions (squares) on the map are identified by their X, Y co-ordinates. (EXAMPLE: Rata-airfield is 8, 5). Each square of the DRL map is characterized by mechanized and non-mechanized movement costs. On the map are also located the six objective squares:

ROGACHEV	0,8
ZHLOBIN	6,8
RATA-A/F	8,5
BOBRYUSK	0,1
REGT.HQ	4,2
PARICHI	10,2

The objective squares are also identified by a red dot.

There are fifteen unit types represented in DRL, their characteristics are given in the chart on the back cover of this Rules Manual. Each unit has an attack, defense, armor strength, and movement allowance factor. During the game each on-map unit can be in one of three combat modes:

ASSAULT (A)—Unit moves and fights with normal movement and combat strength allowances.

STATIC (S)—Unit is 'entrenched'. No movement is allowed, observation ability is reduced, and defensive strength is doubled. This is the only mode in which on-map artillery units may fire indirectly.

MOBILE (M)—Doubled movement capability, all combat strength reduced by one-half, and unit has normal observation ability.

During the game, German unit combat modes are set by the player, Russian combat modes are specified by the computer using an optimizing algorithm.

Combat units are also characterized by a percent strength (which affects combat strength linearly) and a disruption level (which affects combat strength non-linearly). The percent strength factor simply reflects casualties during the battle. Very few German units begin the game at full strength. The German player is unaware of Russian unit strengths throughout the game.

The disruption level is an important DRL concept. The level of disruption for any unit can range from 0 (no disruption) upwards. A disruption level of 1 halves attack and defense strengths, a disruption level of 2 reduces these factors by two-thirds, etc. Disruption may occur as a result of combat, enemy fire during movement, minefield attack, air attack, or artillery barrages. Disruption has no effect on the movement ability of a unit.

II. SET-UP

The first determination made by the computer is the type of scenario situation to be played. There are two situations, Meeting Engagement or Strategic Offensive. The Strategic Offensive differs from the Meeting Engagement by giving both sides more units on-map to start with, reserve units are closer to the battlefield, and more minefields and garrison companies are allocated to the German player. Additionally, the Russian has a better chance of receiving artillery and air support.

You as the German player, now select the 'Degree of Difficulty' (1, 2, 3 or 4), with the 4th degree being the most difficult.

You are now presented with up to three orders of battle, by way of the status report (see EXAMPLE OF GERMAN STATUS REPORT, page 6), with each having a maximum possibility of 15 units to command. You can choose to either accept or refuse the first two choices given, but you must accept the third.

The computer now requests from the German player an initial location and combat mode for each German unit starting on the map. The starting units, in the status report, are identified by a value for % strength, and the numbers 0,0 for location.

After placing all active German units on the map, you now place minefields in up to 8 squares and garrison companies in the objective squares of your choice. Minefields slow, and may stop a Russian unit's advance by causing disruption. The combat report generated by a Russian unit's advance into a minefield may reveal the unit's identity. German units are unaffected by minefields. Garrison companies are used to hold objective squares without committing regular units. They buy time for the German player by delaying the capture of an objective square by Soviet forces. Once placed, garrison companies may not be moved.

When you have concluded your set-up, the computer selects a force from one of the following mixes:

Infantry Heavy
Artillery Heavy
Paratroop Heavy
Mechanized Heavy
Balanced

The Russians start a random portion of a maximum 22 possible units on row 11 'top of the map'; the remaining units are held in reserve and committed as the battle proceeds. The relative victory point values of the 6 objective squares are also established. Although the rating of a particular square is a secret, 3 are rated as major objectives and are worth 11, 9, and 8 victory points. The other 3 are rated as minor objectives and assigned values of 4, 1, and 0 points.

The initial Russian set-up takes into account the German unit dispositions and objective square victory point values. NOTE: The objective squares are labeled on the map with the use of a red dot. Additionally, as part of the Russian set-up, up to 2 partisan infantry units are sometimes placed in the German rear area. Their initial locations and strengths are of course unknown to you. These are normal Russian units in that they move, attack and defend as other Russian units. Only their initial placement is unique. Their presence will be found to complicate your game considerably in some instances.

The final function of the game set-up is in determining the length of the game. The start time is always 400 hours (4 a.m.) and each turn represents one hour simulated time. The end time may be any time between 1100 and 1500 hours. Therefore a DRL game is 8 to 12 turns long. NOTE: In the event of a Russian sweep, the capture of all 3 major objectives early in the game, the battle may be lost much earlier (see V. How To Win).

When the computer has completed setting up the game it will print:

GAME INITIALIZED . . . PRESS RETURN TO CONT

When you are ready to begin play, press 'RETURN (ENTER)'.

EXAMPLE OF GERMAN STATUS REPORT

NO.	UNIT	TYPE	STR	LOC	MODE	STATUS
1	ACTV	SS INF	67%	0,8	STA	OK
2	ACTV	ASLT INF	82%	6,8	ASA	OK
3		RECON	56%	5,6	ASA	OK
4	ACTV	ENGINEER	78%	4,2	ASA	DS 3
5		SECURITY	73%	10,2	ASA	DS 1
6	RESV	ASLT GUN	??	OM-6	MOB	OK

EXPLANATION OF TERMS

NO.—Unit number, used in addressing unit during game.

UNIT—describes status of on-board units:

- ACTV can be moved
- (blank) has already been moved this turn
- COMM committed reserve unit
- RESV uncommitted reserve unit

TYPE—Unit type

STR.—percent strength at present or ?? for off-map units.

LOC—Location on map X, Y format or OM (off-map) followed by the number of turns away.

MODE—Assault (ASA), Static (STA), or Mobile (MOB) for on-map units.
Mobile (MOB) for off-map units.

STATUS—OK for on-map, unrouted, undisrupted units or off-map units.
XX for on-map routed units.

DS followed by numbered Disruption Level for on-map units
that are disrupted.

III. HOW TO PLAY

Each DRL game turn consists of 5 phases:

1. Russian Movement Phase
2. Russian Combat Phase
3. German Movement Phase
4. German Combat Phase
5. Reinforcement Phase

Phases 1 and 5 are handled by the computer, phases 2, 3, and 4 may involve German player interaction.

During the Russian movement phase, the computer executes Russian artillery and smoke barrages, as well as air attacks. The Russian units are then moved from square to square until:

- a) Their movement point allowance is exhausted,
- b) They encounter a German unit,
- c) They are sufficiently disrupted by German fire to cause a halt, and/or
- d) They reach a suitable objective square.

NOTE: Russian units do not move randomly, the computer specifies an objective square for every Russian unit and they move towards it. Also, regardless of terrain type/movement cost, a Russian unit will always move at least 1 square.

During Russian movement, combat messages will appear on the screen, simulating observation and fire reports from various German units. Any observed paratroop landings are also reported. Therefore, you can only follow the movement of Russian units your units can see.

After all battles are resolved (see IV. Combat) in the Russian combat phase, the German movement phase begins. An 'aerial recon' message may appear indicating the percentage disruption level of on-map Russian units. This percentage disruption message is based on the total levels of disruption vs number of Russians currently committed to battle. (EXAMPLE: 10 Russian units are in battle and 2 of them are disrupted level 4, the message would read 80% disrupted.) You may use this as a rough indicator of the damage done so far to the Russian force.

You are now prompted to enter:

CMD/ST/RSV/ART/OBJ or QU ?

These are the German strategic commands. They are interpreted in the following manner.

CMD—(command)—allows you to issue movement and change of status orders.

ST—(status)—allows you to review the status of German units.

RSV—(reserve)—allows you to request the release of off-map units, as reinforcements.

ART—(artillery)—allows you to request off-map artillery support.

OBJ—(objective)—allows you to check the status of the 6 objective squares.

QU—(quit)—allows you to leave the movement phase and go to the German combat phase.

The use of the **CMD** facility is the most complex of the 5 German strategic commands. In particular, these points should be borne in mind while using the **CMD** function:

- a) A unit may be referenced by it only once per game turn, so all movement for each German unit must be completed before going on to the next unit.
- b) When changing combat modes, occasionally the unit will report **OPERATIONAL PROBLEMS** and will not change mode.
- c) A unit continues moving until either it uses up its movement point allowance, bumps into a Russian unit, or comes under fire from nearby Russian unit(s) and is disrupted as a result.

Initially the computer will respond to the CMD function with a request for the number of the unit you wish to move and what mode you want the unit to achieve (M, S, A or N).

- M mobile mode (twice normal movement)
- S static mode (no movement)
- A assault mode (normal movement)
- N no change, maintain current mode

EXAMPLE: Computer prints **ENTER UNIT#, MODE (M, S, A or N)**. Your response should be the number of the unit you want to move, comma, then the first letter of the mode you wish the unit to attain, RETURN (ENTER). The computer then prints **DIRECTION (0-8)**: using the directional rosette located in the lower right hand corner of the player's aid map, input the direction you want the unit to travel then hit RETURN (ENTER).

You may move the designated unit until either:

- a) You enter a 0 (zero) for direction to END movement,
- b) The unit's movement point allowance is used up,
- c) The unit encounters a Russian unit, or
- d) The unit is sufficiently disrupted by Russian fire to cause a halt.

The status report (ST) is the method you use to determine a number of factors about the units you control. The status report's information consists of the unit number, unit status, unit type, % strength, location, combat mode, and level of disruption. (see **EXAMPLE OF GERMAN STATUS REPORT**, p. 6)

The reserve function (RSV) allows you to call for reinforcements. The reinforcements are drawn from the force pool identified in the status report with the unit name of 'RESV'. The value for location, OM-6, means the unit is off the map, 6 hours from the battlefield. Only committed units (COMM) move towards the battlefield.

The artillery command (ART) grants you, based on the situation, a number of off-board artillery missions. To use the artillery simply type in (to the computer's prompt) the target square's X, comma, and Y co-ordinates. If enemy units are in the target square, the computer will display their unit number designation and type.

The objective command (OBJ) allows you to keep track of the ownership of the 6 objective squares. The format of the report is **NAME OF THE OBJECTIVE SQUARE, OWNER**. If the square is currently occupied by Russian units, but still owned by you, the computer will state that the square is **GERMAN HELD/UNDER ATTACK**.

The quit command (QU) ends your movement phase; the combat phase follows. Do not use this command until you are finished moving, firing off-map artillery, requesting reserves, and checking objectives.

The reinforcement phase follows the German combat phase. During this phase the following events take place:

- 1) All German 'committed' reserves are moved 1 hour closer to the battlefield.
- 2) One level of disruption may be removed from any disrupted Russian or German unit, provided that the unit is at least at 30% strength. Units at less strength are considered to be permanently disrupted. German units have higher probability of disruption removal than Russian units.
- 3) All objective squares are checked for Russian capture. An objective square is captured if one or more Russian units occupy it and no garrison companies remain. If an objective square is captured, a message appears so indicating. The capture message also indicates whether the objective is of major or minor victory point value. The capture of an objective square by the Russians is IRREVERSIBLE.
- 4) One or more German units may permanently rout. A routed unit is out of command/control for the remainder of the game. The probability of rout increases with the disruption level of the unit.
- 5) One or more Russian units may be committed to battle. You are aware of these new units only by the combat messages appearing during the subsequent Russian movement phases. New Russian paratroop infantry units enter the game by parachute drops in the German rear area. Usually these units enter the game disrupted.
- 6) A Russian "desperation index" is computed, which is kept secret from you. This index affects the probability of Russian air support and artillery barrages. Most importantly it affects the likelihood of movement and attacks by disrupted Russian units.
- 7) German committed reserves (COMM) due to arrive on-map in the next turn are displayed. Newly arriving German units appear at random locations at the bottom of the map (row 0).

At the conclusion of the reinforcement phase, the Russian victory conditions are checked. If the Russians have not satisfied the conditions, the game clock is advanced and the next turn begins.

IV. COMBAT

It is during the combat phase that battles between German and Russian units are resolved. Combat occurs if enemy units occupy the same square. The DRL battle report lists the units involved on each side and their total combat and armor strengths.

At this time, you may call in on-map heavy or medium artillery to aid in defense or attack. The limitations affecting the use of on-map artillery units to aid combat indirectly are:

- a) The artillery unit did not move or already fire this turn,
- b) the unit is in static mode, is not under attack, and is not disrupted, and
- c) the unit is within range (no more than 5 squares) of the contested square.

If the artillery unit(s) meet the above requirements, they may add 1½ times their attack strengths to combat.

Combat resolution involves a complex algorithm which computes effective combat odds and then determines casualties, disruption, and ownership of the disputed square. The algorithm takes into account:

- severity of fighting—a random variable
- combat modes
- percent strengths
- anti-armor capabilities of defender
- presence of smoke
- disruption levels

The computer displays the effective combat odds and resolves the combat. The computer withdraws the defeated force up to 2 squares towards that force's baseline. It then checks to see if any other battles remain to be resolved.

V. HOW TO WIN

Victory points in DRL are awarded in the following manner:

- a) The German player receives 1 point per game turn.
- b) At the end of the time allowed for the game, the German player receives the victory points for the objective squares held.
- c) The Russian receives the victory points for each objective square they capture at the time of capture.

The Russians win if they have accumulated more victory points than the German player at the end of any turn.

For example, at the end of turn #4 (700 hours) the Russians have captured objective squares worth 20 points; therefore the game ends in a Russian victory with the victory points allocated in the following manner:

German: 4 V.P. (1 per game turn)
13 V.P. (German held objective areas)
 17 V.P. (German total)

Russian: 20 V.P.

Hence the game is over with a Russian victory, 20 V.P. to 17 V.P. for the German.

VI. TACTICAL SUGGESTIONS

DRL can easily be lost for the German player in the initial force selection and set-up. The following are some suggestions to bear in mind when selecting and setting up the German forces.

1. Try for a reasonably balanced German unit mix during force selection. Mobile units are good for counterattacking and guarding rear areas, but many of these unit types have poor defensive strengths. Artillery is useful (indirect fire), and infantry is essential for the defense of the main line of resistance.
2. You see what your units see, therefore it is important not to leave major portions of the German front along the Dnieper River without units, as a Russian advance could go unspotted.
3. It is best to deploy garrison companies in strengths of 4 or more. This will guarantee that they can hold out against Russian units in their square for at least one game turn, allowing time for a counterattack by regular German units.
4. Minefields are best deployed in strengths of 2 or more for reasonable effectiveness. Also, minefields can be placed in objective squares, making a nice complement to any garrison companies stationed there. Since minefields can cause Russian units to be disrupted, and Russian units must be undisrupted to capture an objective square, minefields can buy time for you.
5. Do not dig in (place in static mode) on-map artillery units so far forward they get overrun in the first Russian wave. Remember, on-map artillery only fires indirectly as support fire to German units which are either attacking or defending. Of course, they may still attack and defend normally when in the same square as an enemy unit.
6. When deploying artillery and mechanized units, be aware that Russian air support has standing orders to attack artillery in static mode and mechanized units as first priority targets.
7. Be aware that if Russian units during their combat phase are pushed back into German units, you will not know this until your combat phase and may be forced to attack those Russian units at unfavorable odds.

The German position in DRL can be quite difficult to hold, depending on the Russian objectives and force mix. These are suggestions on tactics arising out of playtesting:

1. Due to the nature of the victory point system (the German side picking up 1 point per turn for surviving), 'buying time' is a valid strategy if the Russians appear unstoppable. This generally is done with counterattacks which may disrupt Russian units.
2. Avoid piecemeal counterattacks. Also, 2:1 odds are necessary to have a slightly better than even chance for a terrain victory (push the Russians back).
3. The tactic of entrenching (static mode) in an objective area and letting the Russians come and attack you can backfire. In several games, the Russians bypassed the fortified localities and headed for other objectives.

CASSETTE LOADING INSTRUCTIONS

ATARI 800

Lift the cartridge door on your ATARI 800 computer and insert the COMPUTING LANGUAGE BASIC cartridge into the computer. Use the LEFT CARTRIDGE slot on the ATARI 800 system.

Press the POWER switch on the side of the console ON. With SIDE ONE of the cassette up, put it into your ATARI CASSETTE RECORDER and press 'REWIND' until the tape stops moving. Using the keyboard, type:

CLOAD

Then press the 'RETURN' key on the keyboard. You will hear one beep. Push 'PLAY' on the recorder and press the 'RETURN' key on the keyboard again. The recorder should start to move and the program will be loaded. By turning up the volume on your video screen you can hear the program being loaded. When the tape stops, the program has been transferred from the cassette tape to the computer. 'READY' will be displayed on the screen. Type:

'RUN'

and press the 'RETURN' key to play the game. Should your video screen display the word ERROR, press the RESET button at the top righthand corner of the keyboard and repeat all of the above loading instructions.

APPLE II

The APPLE program is located on SIDE ONE after the Atari 800 program. The Atari 800 program must be skipped before the APPLE program can be loaded. By listening to the tape, you can tell the difference between the two programs. The APPLE program is easily recognized by the relatively high pitch and 'pure' quality of the calibration tone at the beginning of the program. This tone is free of the characteristic Atari 800 high pitched buzz. Find the beginning of the APPLE program and position the tape to just after the start of the calibration tone. Set up the recorder for input. On the keyboard, type:

LOAD (Don't hit 'RETURN' yet).

Press 'PLAY' on the recorder and immediately press 'RETURN' on the keyboard. The computer will start reading in your program. The computer will beep twice, once at the beginning of the program and once at the end. This program is not short and will take a few minutes to load: When you hear the second beep, type:

RUN

and press 'RETURN' to play the game.

COMMODORE PET CBM

Turn the tape over so SIDE TWO is up. Insert the tape in your recorder and rewind to the beginning of the tape. When ready, type:

LOAD

and press the 'RETURN' button on the keyboard, then the 'PLAY' button on the recorder. The tape should start moving, and start loading your program. This program is not short, and will take several minutes to load. The computer will tell you when it finds the program and starts loading. When done, the computer will print 'READY', and the tape will stop. Type:

RUN

and press 'RETURN' to play the game.

TRS-80

The TRS-80 program is located on SIDE TWO after the PET CBM program. The PET program must be skipped before the TRS-80 program can be loaded. By pulling out the EAR and MIC jacks on the recorder and listening to the tape, you can differentiate the PET program from the TRS-80 program. The PET sounds louder, yet has a lower pitch. The PET program lasts approximately 5 minutes and is followed by a portion of blank tape which is your cue to load the TRS-80 program.

Check that the volume control is set to the proper level (between 5 and 6 is normal). Press 'PLAY' on the recorder, type:

CLOAD

(For Mod III only, enter: L after CASS?, then CLOAD)

and press the 'ENTER' key on the keyboard. The recorder should start to move and your program will be loaded. This will be indicated by the flashing asterisk at the upper right corner of the screen. This program is not short, and will take several minutes to load. When the tape stops and the TRS-80 prints 'READY' on the screen, type:

RUN

and press 'ENTER' to play the game.

DISKETTE LOADING INSTRUCTIONS

APPLE DISKETTE

DRL is designed to play on your Apple II with Applesoft. To play, insert the disk into your 3.2 or 3.3 Disk Drive and "boot" the system.

ATARI DISKETTE

Insert the diskette into Drive #1. Turn on the Disk Drive, then your computer. DRL will boot automatically. Another way: type RUN "D:DRL" to load diskette.

TRS-80 DISKETTE .

To play, insert the diskette into your disk drive and "boot" the system. Model III owners should refer to the conversion instructions enclosed.

IF YOU CANNOT LOAD THE PROGRAM

1. Check your equipment carefully to be sure that all cables and connections are correct.
2. Re-read the section in your computer's manual that tells you how to load a tape. Try to load the tape again.
3. If you can adjust the volume on your recorder, try different settings, both higher and lower.
4. Each program is recorded twice on the tape, one recording right after the other. By listening to the tape, find the beginning of the second recording and try to load it.
5. If possible, load another program from a tape you know works on your computer. This will prove that your equipment works. Try once more to load your game.
6. The normal reason tapes will not load is tape recorder head misalignment. Your computer may be able to save and load programs on its own recorder, but be unable to read tapes made on a different recorder for this reason. Be sure your recorder heads are correctly aligned. Your local computer store or dealer can help you with this.
7. If the program still cannot be loaded, send the cassette, with a complete description of the problem (what type of computer you have, what the computer says, if anything, when you try to load the cassette or play the game, and what you did to try to get it to load.) to:

Avalon Hill Microcomputer Games
4517 Harford Road
Baltimore, Maryland 21214

Defective cassettes will be replaced.

After the program is loaded

Once you have your program loaded, it is a good idea to make a backup copy (for your own use). Follow the normal procedure for saving a basic program in your computer's manual.

YOU NAME IT. WE'VE GOT A GAME ON IT . . .

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DRL Unit Descriptions

GERMAN	RUSSIAN	ATT	DEF	ARM	MVMT	SP
Security	Partisan	2	2	0	6	
Reg Inf	Reg Inf	4	4	0	6	
SS Inf	GDS Inf	6	8	0	6	
Pz Grd	Motr Inf	8	8	2	18	
F/J Inf	Para Inf	6	3	0	6	2
Aslt Inf	NKVD Inf	8	12	3	6	2
Engineer	Engineer	2	3	2	18	
Anti-Tnk	Anti-Tnk	1	2	1	6	1
Pzjaeger	SU 85's	6	6	8	12	1
Med Art	Med Art	2	1	0	6	3
Hvy Art	Hvy Art	4	1	0	6	3
Med Pnzn	T34	4	2	4	18	1
Hvy Pnzn	KV 85	8	2	6	12	1
Aslt Gun	Aslt Gun	6	2	6	12	1
Recon	Recon	4	6	2	22	1

SPECIAL NOTES (SP):

- 1) May fire on enemy mechanized units during enemy movement phase.
- 2) Parachute movement capability (Russian only).
- 3) Indirect fire capability (German only).

Analysis of DRL Units

SECURITY/PARTISAN—Ill-equipped, ill-trained infantry.

REG INF—Well-equipped, trained troops.

SS INF/GDS INF—Well-equipped, veteran infantry.

PZ GRD/MOTR INF—Panzer grenadiers/motorized infantry.

F/J INF/ PARA INF—Fallschirmjaeger/Paratroopers.

ASLT INF/NKVD INF—Well-equipped, elite veteran infantry.

ENGINEER—Mobile, well-equipped small infantry unit with some supporting armor

ANTI-TNK—Unit of hand-held anti-tank weapons and light anti-tank guns.

PZJAEGER/SU 85's—Self-propelled antitank weapons.

MED ART—Medium caliber artillery, 75mm.

HVY ART—Large caliber artillery, 105 mm.

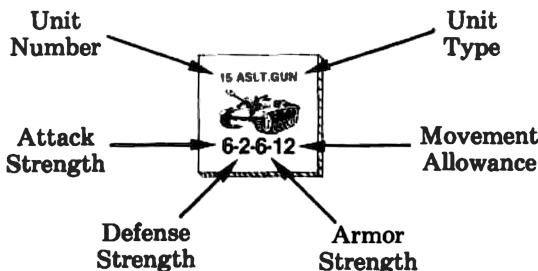
MED PNZR/T34—Medium-classed armored fighting vehicles.

HVY PNZR/KV 85—Heavy-classed armored fighting vehicles.

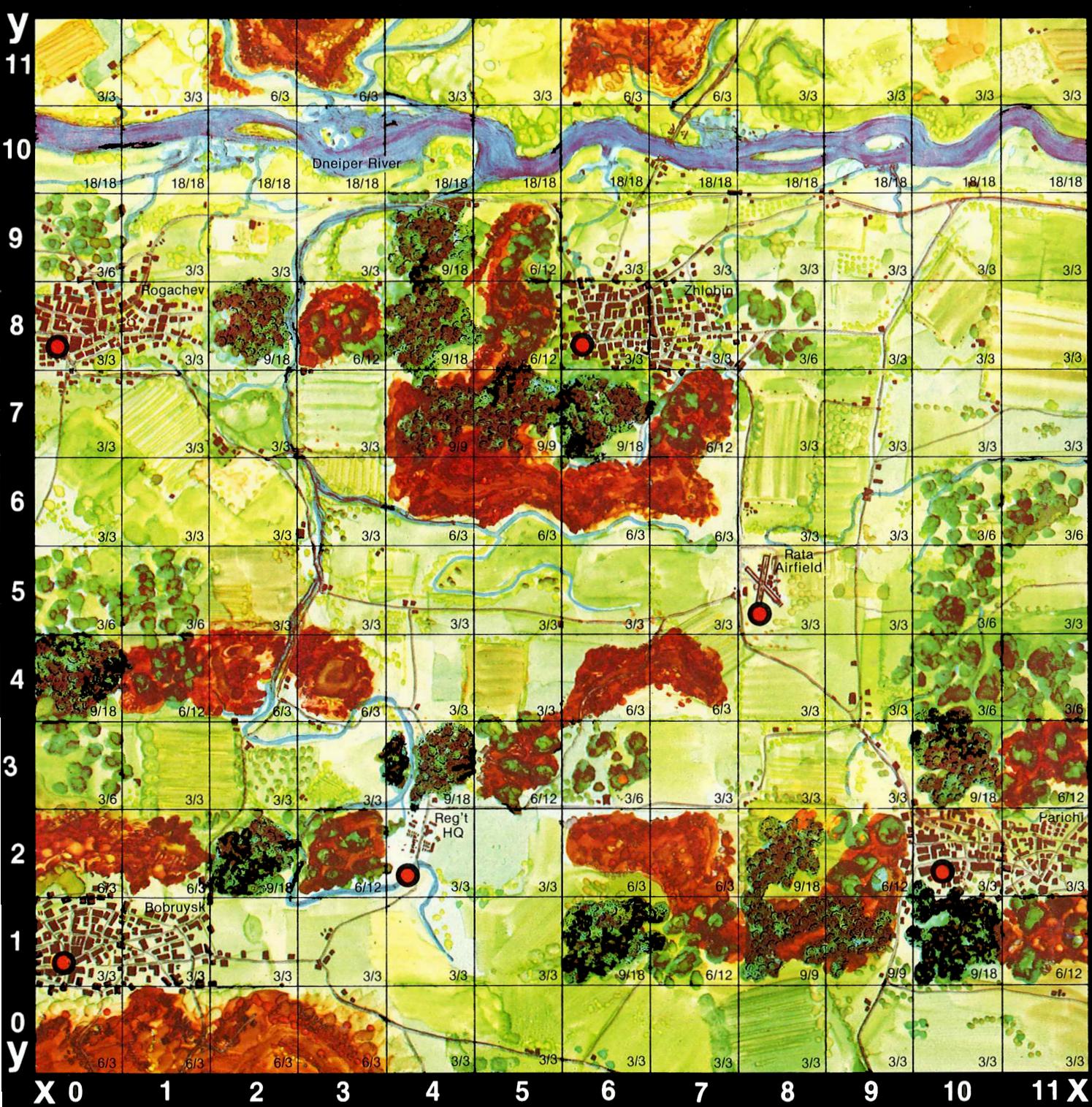
ASLT GUN—Self-propelled artillery for infantry support.

RECON—Reconnaissance unit, armored cars.

COUNTER EXPLANATION



Dnieper River Line



City



Steppe

Light Woods

Open Hills

Light
Wooded
HillsForested
HillsHeavy
Forest

River

Movement Point
Costs Key:
3/6
Non-Mech/Mech

8	1	2
7	0	3
6	5	4

DIRECTIONAL GRID

4170141

Dnieper River Line

1 HVY.ART. 4-1-0-6	2 HVY.ART. 4-1-0-6	3 HVY.ART. 4-1-0-6	4 HVY.ART. 4-1-0-6	5 HVY.ART. 4-1-0-6	6 HVY.ART. 4-1-0-6	7 HVY.ART. 4-1-0-6	8 HVY.ART. 4-1-0-6
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9 HVY.ART. 4-1-0-6	10 HVY.ART. 4-1-0-6	11 HVY.ART. 4-1-0-6	12 HVY.ART. 4-1-0-6	13 HVY.ART. 4-1-0-6	14 HVY.ART. 4-1-0-6	15 HVY.ART. 4-1-0-6	HVY.ART. 4-1-0-6
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1 RECON. 4-6-2-22	2 RECON. 4-6-2-22	3 RECON. 4-6-2-22	4 RECON. 4-6-2-22	5 RECON. 4-6-2-22	6 RECON. 4-6-2-22	7 RECON. 4-6-2-22	8 RECON. 4-6-2-22
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9 RECON. 4-6-2-22	10 RECON. 4-6-2-22	11 RECON. 4-6-2-22	12 RECON. 4-6-2-22	13 RECON. 4-6-2-22	14 RECON. 4-6-2-22	15 RECON. 4-6-2-22	RECON. 4-6-2-22
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1 HVY.PNZR. 8-2-6-12	2 HVY.PNZR. 8-2-6-12	3 HVY.PNZR. 8-2-6-12	4 HVY.PNZR. 8-2-6-12	5 HVY.PNZR. 8-2-6-12	6 HVY.PNZR. 8-2-6-12	7 HVY.PNZR. 8-2-6-12	8 HVY.PNZR. 8-2-6-12
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9 HVY.PNZR. 8-2-6-12	10 HVY.PNZR. 8-2-6-12	11 HVY.PNZR. 8-2-6-12	12 HVY.PNZR. 8-2-6-12	13 HVY.PNZR. 8-2-6-12	14 HVY.PNZR. 8-2-6-12	15 HVY.PNZR. 8-2-6-12	HVY.PNZR. 8-2-6-12
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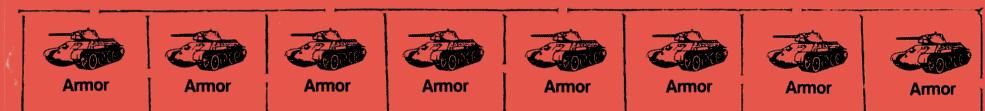
1 MED.PNZR. 4-2-4-18	2 MED.PNZR. 4-2-4-18	3 MED.PNZR. 4-2-4-18	4 MED.PNZR. 4-2-4-18	5 MED.PNZR. 4-2-4-18	6 MED.PNZR. 4-2-4-18	7 MED.PNZR. 4-2-4-18	8 MED.PNZR. 4-2-4-18
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9 MED.PNZR. 4-2-4-18	10 MED.PNZR. 4-2-4-18	11 MED.PNZR. 4-2-4-18	12 MED.PNZR. 4-2-4-18	13 MED.PNZR. 4-2-4-18	14 MED.PNZR. 4-2-4-18	15 MED.PNZR. 4-2-4-18	MED.PNZR. 4-2-4-18
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1 ASLT.GUN 6-2-6-12	2 ASLT.GUN 6-2-6-12	3 ASLT.GUN 6-2-6-12	4 ASLT.GUN 6-2-6-12	5 ASLT.GUN 6-2-6-12	6 ASLT.GUN 6-2-6-12	7 ASLT.GUN 6-2-6-12	8 ASLT.GUN 6-2-6-12
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9 ASLT.GUN 6-2-6-12	10 ASLT.GUN 6-2-6-12	11 ASLT.GUN 6-2-6-12	12 ASLT.GUN 6-2-6-12	13 ASLT.GUN 6-2-6-12	14 ASLT.GUN 6-2-6-12	15 ASLT.GUN 6-2-6-12	ASLT.GUN 6-2-6-12
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Minefield							
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Dnieper River Line

							
1 SECURITY 2-2-6	2 SECURITY 2-2-6	3 SECURITY 2-2-6	4 SECURITY 2-2-6	5 SECURITY 2-2-6	6 SECURITY 2-2-6	7 SECURITY 2-2-6	8 SECURITY 2-2-6
							SECURITY 2-2-6
9 SECURITY 2-2-6	10 SECURITY 2-2-6	11 SECURITY 2-2-6	12 SECURITY 2-2-6	13 SECURITY 2-2-6	14 SECURITY 2-2-6	15 SECURITY 2-2-6	SECURITY 2-2-6

							
1 ASLT.INF. 8-12-3-6	2 ASLT.INF. 8-12-3-6	3 ASLT.INF. 8-12-3-6	4 ASLT.INF. 8-12-3-6	5 ASLT.INF. 8-12-3-6	6 ASLT.INF. 8-12-3-6	7 ASLT.INF. 8-12-3-6	8 ASLT.INF. 8-12-3-6
							ASLT.INF. 8-12-3-6
9 ASLT.INF. 8-12-3-6	10 ASLT.INF. 8-12-3-6	11 ASLT.INF. 8-12-3-6	12 ASLT.INF. 8-12-3-6	13 ASLT.INF. 8-12-3-6	14 ASLT.INF. 8-12-3-6	15 ASLT.INF. 8-12-3-6	ASLT.INF. 8-12-3-6

							
1 REG.INF. 4-4-0-6	2 REG.INF. 4-4-0-6	3 REG.INF. 4-4-0-6	4 REG.INF. 4-4-0-6	5 REG.INF. 4-4-0-6	6 REG.INF. 4-4-0-6	7 REG.INF. 4-4-0-6	8 REG.INF. 4-4-0-6
							REG.INF. 4-4-0-6
9 REG.INF. 4-4-0-6	10 REG.INF. 4-4-0-6	11 REG.INF. 4-4-0-6	12 REG.INF. 4-4-0-6	13 REG.INF. 4-4-0-6	14 REG.INF. 4-4-0-6	15 REG.INF. 4-4-0-6	REG.INF. 4-4-0-6

							
1 ENGINEER 2-3-2-18	2 ENGINEER 2-3-2-18	3 ENGINEER 2-3-2-18	4 ENGINEER 2-3-2-18	5 ENGINEER 2-3-2-18	6 ENGINEER 2-3-2-18	7 ENGINEER 2-3-2-18	8 ENGINEER 2-3-2-18
							ENGINEER 2-3-2-18
9 ENGINEER 2-3-2-18	10 ENGINEER 2-3-2-18	11 ENGINEER 2-3-2-18	12 ENGINEER 2-3-2-18	13 ENGINEER 2-3-2-18	14 ENGINEER 2-3-2-18	15 ENGINEER 2-3-2-18	ENGINEER 2-3-2-18

							
1 SS INF. 6-8-0-6	2 SS INF. 6-8-0-6	3 SS INF. 6-8-0-6	4 SS INF. 6-8-0-6	5 SS INF. 6-8-0-6	6 SS INF. 6-8-0-6	7 SS INF. 6-8-0-6	8 SS INF. 6-8-0-6
							SS INF. 6-8-0-6
9 SS INF. 6-8-0-6	10 SS INF. 6-8-0-6	11 SS INF. 6-8-0-6	12 SS INF. 6-8-0-6	13 SS INF. 6-8-0-6	14 SS INF. 6-8-0-6	15 SS INF. 6-8-0-6	SS INF. 6-8-0-6

							
1 ANTI.TNK. 1-2-1-6	2 ANTI.TNK. 1-2-1-6	3 ANTI.TNK. 1-2-1-6	4 ANTI.TNK. 1-2-1-6	5 ANTI.TNK. 1-2-1-6	6 ANTI.TNK. 1-2-1-6	7 ANTI.TNK. 1-2-1-6	8 ANTI.TNK. 1-2-1-6
							ANTI.TNK. 1-2-1-6
9 ANTI.TNK. 1-2-1-6	10 ANTI.TNK. 1-2-1-6	11 ANTI.TNK. 1-2-1-6	12 ANTI.TNK. 1-2-1-6	13 ANTI.TNK. 1-2-1-6	14 ANTI.TNK. 1-2-1-6	15 ANTI.TNK. 1-2-1-6	ANTI.TNK. 1-2-1-6

						
1 PZ.GRD. 8-8-2-18	2 PZ.GRD. 8-8-2-18	3 PZ.GRD. 8-8-2-18	4 PZ.GRD. 8-8-2-18	5 PZ.GRD. 8-8-2-18	6 PZ.GRD. 8-8-2-18	7 PZ.GRD. 8-8-2-18
						
9 PZ.GRD. 8-8-2-18	10 PZ.GRD. 8-8-2-18	11 PZ.GRD. 8-8-2-18	12 PZ.GRD. 8-8-2-18	13 PZ.GRD. 8-8-2-18	14 PZ.GRD. 8-8-2-18	15 PZ.GRD. 8-8-2-18

							
1 PZJAEGER 6-6-8-12	2 PZJAEGER 6-6-8-12	3 PZJAEGER 6-6-8-12	4 PZJAEGER 6-6-8-12	5 PZJAEGER 6-6-8-12	6 PZJAEGER 6-6-8-12	7 PZJAEGER 6-6-8-12	8 PZJAEGER 6-6-8-12
							PZJAEGER 6-6-8-12
9 PZJAEGER 6-6-8-12	10 PZJAEGER 6-6-8-12	11 PZJAEGER 6-6-8-12	12 PZJAEGER 6-6-8-12	13 PZJAEGER 6-6-8-12	14 PZJAEGER 6-6-8-12	15 PZJAEGER 6-6-8-12	PZJAEGER 6-6-8-12

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